

## ANALYTICAL REPORT

Lab Number: L1016653

Client: Haley & Aldrich, Inc.

100 Corporate Place

Suite 105

Rocky Hill, CT 06067-1803

ATTN: Deborah Motycka Downie

Phone: (860) 282-9400

Project Name: 23 BARRY PLACE

Project Number: 35034-006

Report Date: 11/01/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: 23 BARRY PLACE Lab Number: L1016653

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1016653-01	HA-AOC22-B311-S4	Not Specified	10/19/10 17:24
L1016653-02	HA-AOC22-B311-S5	Not Specified	10/19/10 17:30
L1016653-03	HA-AOC22-B310-S1	Not Specified	10/19/10 17:38
L1016653-04	HA-AOC22-B310-S2	Not Specified	10/19/10 17:44
L1016653-05	HA-AOC22-B310-S3	Not Specified	10/19/10 17:48
L1016653-06	HA-AOC22-B310-S4	Not Specified	10/19/10 17:50
L1016653-07	HA-AOC22-B310-S5	Not Specified	10/19/10 17:55
L1016653-08	HA-DUP3-101910	Not Specified	10/19/10 00:00



**Project Name:** 23 BARRY PLACE **Lab Number:** L1016653

**Project Number:** 35034-006 **Report Date:** 11/01/10

# CT DEP Reasonable Confidence Protocols Laboratory Analysis QA/QC Certification Form

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed (including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents)?	YES
1a	Were the method specified preservation and holding time requirements met?	YES
1b	VPH & EPH Methods Only: Was the VPH or EPH Method conducted without significant modifications (see Section 11.3 of respective Methods)?	N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	YES
3	Were all samples received at an appropriate temperature (4°C ± 2°)?	YES
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	NO
5a	Were reporting limits specified or referenced on the chain-of-custody?	YES
5b	Were these reporting limits met?	YES
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	YES
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	NO

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or question B is "No", the data package does not meet the requirements for "Reasonable Confidence".



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Lab Number:

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#### **Case Narrative**

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.	

#### **RCP Related Narratives**

#### **PCBs**

L1016653-03 and -04 have elevated detection limits due to the dilutions required by matrix interferences encountered during the concentration of the samples.

L1016653-05 has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

In reference to question 4:

The surrogate recoveries for L1016653-05 are below the acceptance criteria for 2,4,5,6-Tetrachloro-m-xylene and Decachlorobiphenyl (all at 0%) due to the dilution required to quantitate the sample. Re-extraction is not required; therefore, the results of the original analysis are reported.



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## **Case Narrative (continued)**

In reference to question 7:

L1016653-05: An MS/MSD was not analyzed because the dilution required by the elevated concentrations of target compounds present in the sample to be utilized for the MS/MSD would have caused the spike compounds to be diluted below the range of calibration.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Title: Technical Director/Representative Date: 11/01/10

600, Selly Stenstrom

## **ORGANICS**



## **PCBS**



10/22/10 21:30

Extraction Date:

**Project Name:** Lab Number: 23 BARRY PLACE L1016653

**Project Number:** Report Date: 35034-006 11/01/10

## **SAMPLE RESULTS**

Lab ID: L1016653-03 Date Collected: 10/19/10 17:38

Client ID: HA-AOC22-B310-S1 Date Received: 10/21/10

Sample Location: Not Specified Field Prep: Not Specified Extraction Method: EPA 3540C

Matrix: Soil Analytical Method: 77,8082 Analytical Date: 10/26/10 17:19

Cleanup Method1: EPA 3665A Analyst: KΒ Cleanup Date1: 10/26/10 94% Percent Solids: EPA 3660B

Cleanup Method2: Cleanup Date2: 10/26/10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
CT RCP Polychlorinated Biphenyl	s - Westborough Lab					
Aroclor 1016	ND		ug/kg	41.8		2
Aroclor 1221	ND		ug/kg	41.8		2
Aroclor 1232	ND		ug/kg	41.8		2
Aroclor 1242	ND		ug/kg	41.8		2
Aroclor 1248	ND		ug/kg	27.8		2
Aroclor 1254	ND		ug/kg	41.8		2
Aroclor 1260	ND		ug/kg	27.8		2
Aroclor 1262	ND		ug/kg	13.9		2
Aroclor 1268	ND		ug/kg	13.9		2

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	79		30-150	А
2,4,5,6-Tetrachloro-m-xylene	76		30-150	В
Decachlorobiphenyl	76		30-150	В



10/19/10 17:44

**EPA 3540C** 

Project Name: 23 BARRY PLACE Lab Number: L1016653

**Project Number:** 35034-006 **Report Date:** 11/01/10

## **SAMPLE RESULTS**

Lab ID: L1016653-04 Date Collected:

Client ID: HA-AOC22-B310-S2 Date Received: 10/21/10

Sample Location: Not Specified Field Prep: Not Specified

Matrix: Soil Extraction Method: Analytical Method: 77,8082 Extraction Date:

Analytical Method: 77,8082 Extraction Date: 10/22/10 21:30
Analytical Date: 10/26/10 17:33 Cleanup Method1: EPA 3665A
Analyst: KB Cleanup Date1: 10/26/10

Percent Solids: 88% Cleanup Method2: EPA 3660B Cleanup Date2: 10/26/10

Parameter Result Qualifier Units RL MDL **Dilution Factor** CT RCP Polychlorinated Biphenyls - Westborough Lab Aroclor 1016 ND 2 ug/kg 44.2 Aroclor 1221 ND 2 ug/kg 44.2 Aroclor 1232 ND ug/kg 44.2 2 --Aroclor 1242 ND 44.2 2 ug/kg 289 2 Aroclor 1248 ug/kg 29.5 2 Aroclor 1254 205 44.2 ug/kg Aroclor 1262 ND ug/kg 14.7 2 Aroclor 1268 ND 2 14.7 ug/kg

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	102		30-150	Α
Decachlorobiphenyl	99		30-150	А
2,4,5,6-Tetrachloro-m-xylene	92		30-150	В
Decachlorobiphenyl	98		30-150	В



Project Name: 23 BARRY PLACE Lab Number: L1016653

**Project Number:** 35034-006 **Report Date:** 11/01/10

**SAMPLE RESULTS** 

Lab ID: L1016653-04

Client ID: HA-AOC22-B310-S2

Sample Location: Not Specified

Matrix: Soil
Analytical Method: 77,8082
Analytical Date: 10/26/10 17:33

Analyst: KB Percent Solids: 88%

Date Collected: 10/19/10 17:44 Date Received: 10/21/10 Field Prep: Not Specified Extraction Method: EPA 3540C Extraction Date: 10/22/10 21:30 Cleanup Method1: EPA 3665A Cleanup Date1: 10/26/10 Cleanup Method2: EPA 3660B Cleanup Date2: 10/26/10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
CT RCP Polychlorinated Biphenyls - Westborough Lab						
Aroclor 1260	104		ug/kg	29.5		2

			Acceptance			
Surrogate	% Recovery	Qualifier	Criteria	Column		
2,4,5,6-Tetrachloro-m-xylene	102		30-150	Α		
Decachlorobiphenyl	99		30-150	Α		
2,4,5,6-Tetrachloro-m-xylene	92		30-150	В		
Decachlorobiphenyl	98		30-150	В		



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## **SAMPLE RESULTS**

Lab ID: L1016653-05 D
Client ID: HA-AOC22-B310-S3

Sample Location: Not Specified

Matrix: Soil
Analytical Method: 77,8082
Analytical Date: 10/29/10 18:23

Analyst: KB Percent Solids: 81% Date Collected: 10/19/10 17:48

Date Received: 10/21/10

Field Prep: Not Specified

Extraction Method: EPA 3540C

Extraction Date: 10/22/10 21:30

Cleanup Method1: EPA 3665A

Cleanup Method1: EPA 3665A
Cleanup Date1: 10/26/10
Cleanup Method2: EPA 3660B
Cleanup Date2: 10/26/10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
CT RCP Polychlorinated Biphenyls - Westborough Lab						
Aroclor 1248	4680		ug/kg	326		20
Aroclor 1260	3970		ug/kg	326		20

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	А
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	В
Decachlorobiphenyl	0	Q	30-150	В



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Lab Number:

## **SAMPLE RESULTS**

Lab ID: D L1016653-05 Client ID: HA-AOC22-B310-S3

Sample Location: Not Specified

Matrix: Soil Analytical Method: 77,8082

Analytical Date: 10/29/10 18:23

Analyst: KΒ 81% Percent Solids:

Date Collected: 10/19/10 17:48 Date Received: 10/21/10

Field Prep: Not Specified Extraction Method: EPA 3540C Extraction Date: 10/22/10 21:30

Cleanup Method1: EPA 3665A Cleanup Date1: 10/26/10 Cleanup Method2: EPA 3660B

Cleanup Date2: 10/26/10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
CT RCP Polychlorinated Biphenyls - Wes	tborough Lab					
Aroclor 1016	ND		ug/kg	489		20
Aroclor 1221	ND		ug/kg	489		20
Aroclor 1232	ND		ug/kg	489		20
Aroclor 1242	ND		ug/kg	489		20
Aroclor 1254	2840		ug/kg	489		20
Aroclor 1262	ND		ug/kg	163		20
Aroclor 1268	ND		ug/kg	163		20

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	Α
Decachlorobiphenyl	0	Q	30-150	Α
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	В
Decachlorobiphenyl	0	Q	30-150	В



Project Name: 23 BARRY PLACE Lab Number: L1016653

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## **SAMPLE RESULTS**

Lab ID: L1016653-08
Client ID: HA-DUP3-101910

Sample Location: Not Specified

Matrix: Soil
Analytical Method: 77,8082
Analytical Date: 10/26/10 18:02

Analyst: KB Percent Solids: 75%

Date Collected: 10/19/10 00:00 Date Received: 10/21/10 Field Prep: Not Specified Extraction Method: EPA 3540C Extraction Date: 10/22/10 21:30 Cleanup Method1: EPA 3665A Cleanup Date1: 10/26/10 Cleanup Method2: EPA 3660B Cleanup Date2: 10/26/10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
CT RCP Polychlorinated Biphenyls - We	stborough Lab					
A 1 4040	ND					
Aroclor 1016	ND		ug/kg	25.6		1
Aroclor 1221	ND		ug/kg	25.6		1
Aroclor 1232	ND		ug/kg	25.6		1
Aroclor 1242	ND		ug/kg	25.6		1
Aroclor 1248	150		ug/kg	17.0		1
Aroclor 1254	110		ug/kg	25.6		1
Aroclor 1260	264		ug/kg	17.0		1
Aroclor 1262	ND		ug/kg	8.52		1
Aroclor 1268	ND		ug/kg	8.52		1

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	100		30-150	A
Decachlorobiphenyl	101		30-150	А
2,4,5,6-Tetrachloro-m-xylene	89		30-150	В
Decachlorobiphenyl	88		30-150	В



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**Project Name:** 23 BARRY PLACE

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Lab Number:

**Method Blank Analysis Batch Quality Control** 

Analytical Method: 77,8082 Analytical Date: 10/27/10 00:36

Analyst: KΒ Extraction Method: EPA 3540C Extraction Date: 10/22/10 21:30 Cleanup Method1: EPA 3665A Cleanup Date1: 10/26/10 Cleanup Method2: EPA 3660B Cleanup Date2: 10/26/10

Parameter	Result	Qualifier	Units	RL		MDL
CT RCP Polychlorinated Biphenyls	- Westboro	ugh Lab for	sample(s):	03-05,08	Batch:	WG438979-1
Annual and AOAO	ND			20.0		
Aroclor 1016 Aroclor 1221	ND ND		ug/kg ug/kg	20.0		
Aroclor 1232	ND		ug/kg	20.0		<del></del>
Aroclor 1242	ND		ug/kg	20.0		
Aroclor 1248	ND		ug/kg	13.3		
Aroclor 1254	ND		ug/kg	20.0		
Aroclor 1260	ND		ug/kg	13.3		
Aroclor 1262	ND		ug/kg	6.67		
Aroclor 1268	ND		ug/kg	6.67		

		1	Acceptance	•
Surrogate	%Recovery	Qualifier	Criteria	Column
2.4.5.6. Totrophloro miyulono	110		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	110		30-150	A
Decachlorobiphenyl	111		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	130		30-150	В
Decachlorobiphenyl	122		30-150	В



## Lab Control Sample Analysis Batch Quality Control

**Project Name:** 23 BARRY PLACE

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11/01/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
CT RCP Polychlorinated Biphenyls - V	Vestborough Lab Assoc	ciated samp	ple(s): 03-05,08	Batch:	WG438979-2	WG438979-3		
Aroclor 1016	125		127		40-140	2		50
Aroclor 1260	129		123		40-140	5		50

	LCS		LCSD		Acceptance	<b>:</b>
Surrogate	%Recovery	Qual	%Recovery	Qual	Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	118		115		30-150	Α
Decachlorobiphenyl	114		116		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	115		123		30-150	В
Decachlorobiphenyl	108		119		30-150	В



## INORGANICS & MISCELLANEOUS



L1016653

**Project Name:** 23 BARRY PLACE

**Project Number: Report Date:** 11/01/10 35034-006

Lab Number:

**SAMPLE RESULTS** 

Lab ID: Date Collected: L1016653-03 10/19/10 17:38

HA-AOC22-B310-S1 Client ID: Date Received: 10/21/10 Not Specified Not Specified Sample Location: Field Prep:

Matrix: Soil

Analytical Method **Dilution** Date Date Factor Prepared Analyzed Parameter Result Qualifier Units RL MDL Analyst General Chemistry - Westborough Lab Solids, Total % 0.10 NA 1 10/25/10 19:00 30,2540G AW



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**Project Name:** 23 BARRY PLACE

**Project Number:** Report Date: 11/01/10 35034-006

Lab Number:

**SAMPLE RESULTS** 

Lab ID: L1016653-04 Date Collected: 10/19/10 17:44 HA-AOC22-B310-S2

Client ID: Date Received: 10/21/10 Sample Location: Not Specified Not Specified Field Prep:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - V	Westborough Lab									
Solids, Total	88		%	0.10	NA	1	-	10/25/10 19:00	30,2540G	AW



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Lab Number:

**Project Name:** 23 BARRY PLACE

**Project Number:** Report Date:

11/01/10 35034-006

**SAMPLE RESULTS** 

Lab ID: Date Collected: L1016653-05 10/19/10 17:48 HA-AOC22-B310-S3

Client ID: Date Received: 10/21/10 Sample Location: Not Specified Not Specified Field Prep:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry -	Westborough Lab	)								
Solids, Total	81		%	0.10	NA	1	_	10/25/10 19:00	30,2540G	AW



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Project Name: 23 BARRY PLACE Lab Number:

**Project Number:** 35034-006 **Report Date:** 11/01/10

11/01/10

**SAMPLE RESULTS** 

Lab ID: L1016653-08 Date Collected: 10/19/10 00:00

Client ID: HA-DUP3-101910 Date Received: 10/21/10 Sample Location: Not Specified Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry -	Westborough Lab	)								
Solids, Total	75		%	0.10	NA	1	-	10/25/10 19:00	30,2540G	AW



Lab Duplicate Analysis
Batch Quality Control

Batch Quality Control Lab Number: L1016653

**Project Number:** 35034-006 **Report Date:** 11/01/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual RP	D Limits
General Chemistry - Westborough Lab Associated samp B310-S3	ple(s): 03-05,08	QC Batch ID: WG439323-1	QC Sample:	L1016653-05	Client ID: HA	A-AOC22-
Solids, Total	81	83	%	2		20



**Project Name:** 

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Project Name: 23 BARRY PLACE

Lab Number: L1016653 **Report Date:** 11/01/10 Project Number: 35034-006

## **Sample Receipt and Container Information**

YES Were project specific reporting limits specified?

Reagent H2O Preserved Vials Frozen on: NA

**Cooler Information Custody Seal** 

Cooler

Α Absent

Container Info	rmation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1016653-01A	Amber 250ml unpreserved	Α	N/A	2.9	Υ	Absent	HOLD(14)
L1016653-02A	Amber 250ml unpreserved	Α	N/A	2.9	Υ	Absent	HOLD(14)
L1016653-03A	Amber 250ml unpreserved	Α	N/A	2.9	Υ	Absent	TS(7),CT-8082LL-3540C(14)
L1016653-04A	Amber 250ml unpreserved	Α	N/A	2.9	Υ	Absent	TS(7),CT-8082LL-3540C(14)
L1016653-05A	Amber 250ml unpreserved	Α	N/A	2.9	Υ	Absent	TS(7),CT-8082LL-3540C(14)
L1016653-05B	Amber 250ml unpreserved	Α	N/A	2.9	Υ	Absent	TS(7),CT-8082LL-3540C(14)
L1016653-06A	Amber 250ml unpreserved	Α	N/A	2.9	Υ	Absent	HOLD(14)
L1016653-07A	Amber 250ml unpreserved	Α	N/A	2.9	Υ	Absent	HOLD(14)
L1016653-08A	Amber 250ml unpreserved	Α	N/A	2.9	Υ	Absent	TS(7),CT-8082LL-3540C(14)



Project Name: 23 BARRY PLACE Lab Number: L1016653

#### **GLOSSARY**

#### Acronyms

EPA - Environmental Protection Agency.

 LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD · Laboratory Control Sample Duplicate: Refer to LCS.

MDL • Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS • Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD · Matrix Spike Sample Duplicate: Refer to MS.

NA · Not Applicable.

NC • Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI · Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

#### **Terms**

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

#### Data Qualifiers

- A Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- **D** Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- ${\bf E} \qquad \hbox{-Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.}$
- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- **R** Analytical results are from sample re-analysis.

Report Format: Data Usability Report



Project Name:23 BARRY PLACELab Number:L1016653Project Number:35034-006Report Date:11/01/10

## Data Qualifiers

**RE** - Analytical results are from sample re-extraction.

J Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**ND** • Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report



Project Name:23 BARRY PLACELab Number:L1016653Project Number:35034-006Report Date:11/01/10

#### REFERENCES

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

77 Connecticut DEP Quality Assurance and Quality Control Requirements for SW-846 Methods. CTDEP Reasonable Confidence Protocols (RCPs). Version 1.0, July 2005.

### **LIMITATION OF LIABILITIES**

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## **Certificate/Approval Program Summary**

Last revised July 19, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

## Connecticut Department of Public Health Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

## Maine Department of Human Services Certificate/Lab ID: 2009024.

*Drinking Water* (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA VPH.)

Solid Waste/Soil (Organic Parameters: ME DRO, ME GRO, MA EPH, MA VPH.)

#### Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B,

5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

### New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

### New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

*Drinking Water* (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

## New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

*Drinking Water* (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500Cl-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, S\M3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources <u>Certificate/Lab ID</u>: 666. <u>Organic Parameters</u>: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-03671. *NELAP Accredited. Non-Potable Water* (Organic Parameters: EPA 3510C, 5030B, 625, 624. 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. NELAP Accredited via NY-DOH.

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

**Texas Commisson on Environmental Quality** <u>Certificate/Lab ID</u>: T104704476-09-1. **NELAP Accredited.** *Non-Potable Water* (<u>Inorganic Parameters</u>: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540B, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2<sup>-</sup> D, 510C, 5210B, 5220D, 5310C, 5540C. <u>Organic Parameters</u>: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

## Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

#### **Analytes Not Accredited by NELAP**

Certification is not available by NELAP for the following analytes: **EPA 8260B**: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A**: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C**: Methyl naphthalene, Dimethyl naphthalene, Total Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

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